

111
Dear Timothy & Barbara,

Here is the paper (or at least part of it) that I told you about -

The Cannabis Sativa study begins on the 2nd page —

Thanks for coming down -
I loved seeing you again -

Love
Pean

From the paper on: Jean Millay, Ph.D.
Brainwave Synchrony —

CONTINUATION OF THE ORIGINAL STUDY OF SYNC AND TELEPATHY

In the original study Team Absolute Sync scores were correlated significantly with team telepathy scores, but since neither scores could be shown to be significant separately some questions needed clarification: Does interpersonal EEG synchronization represent a conscious act between two people, or do some observed increases in Team Absolute Sync scores merely reflect, as some have suggested, only the automatic mathematical pattern created when individuals increase their alpha scores? In order to explore this question further, a different format was needed for the Sync training procedure. Teams would need to be able to suppress as well as to increase Sync to call it a conscious act. The study about this problem was presented to the Biofeedback Society of America in 1975 (Mayo (Millay), Targ, & Hurt, note 5).

The first thing needed would be a more efficient method of keeping track of actual time in Sync and reporting scores back to participants after each trial. During the original study, this had not been possible. While synchronization feedback was given to the participants as an on/off tone, actual percent-time scores were so difficult to determine from the Rustrak event recorder, that they were not computed until after all the sessions had been completed. An automatic counter was loaned to us by Scully which counted synchronization time during each one minute trial period so that total time of Sync could be immediately compared by the participant to the mental strategies used to achieve it. Any increases or decreases (in seconds or tenths of seconds) of synchronization became a necessary part of the feedback training cycle. In this way, many short trials could be attempted in one session for

comparison. This improvement in the feedback and score keeping process allowed participants and researchers alike to explore even small differences in scores between attempts at enhancement and suppression of synchronization. Since seven of the original teams continued to demonstrate active interest in the training and were eager to practice Team Sync, they agreed to assist in the exploration of this question. They were instructed to attempt to maintain their individual alpha tones during suppression, and to maintain the Sync tone during enhancement.

The results showed that five of the 7 teams were able to identify Team Sync and to suppress it with an average difference of 5% between Sync enhancement and suppression (ten trials each). As the training sessions began, suppression trials sometimes produced higher Team Sync scores than enhancement trials. It became apparent that trying to synchronize was less useful than just letting it happen. As participants made this discrimination, the scores for enhancement and suppression of Team Absolute Sync began to show more separation in the expected direction. However, one team continued to show higher synchronization scores during suppression than during enhancement. For them, enhancement meant the need to perform and suppression meant relaxation.

To some extent, a valid criticism of this study was that the suppression scores were sometimes confounded by the practice of simply blocking alpha. However, if that were always the case, the difference in the scores would be considerably wider, since blocking alpha is usually a simple process for some people.

Another approach to the question about the phenomena of Team Sync and consciousness was suggested by some of the participants. Informal observations had suggested that percent-time of alpha rhythms increased for individuals when they used Cannabis Sativa. Perhaps the use of Cannabis Sativa could increase Team Sync sufficiently to understand the process better. Therefore, an

additional study was initiated in cooperation with eight of the original participants, who really wanted to know about their own brainwave responses before and during the use of Cannabis Sativa.

Relevant to this project was a 1967 report from Scully (note 6.) in which he isolated at least four psychoactive bands in a chromatographic study of a kilo of Mexican Acapulco Gold (A brief description of this process is provided in the appendix). These four isolated psychoactive substances were tested by Scully and other volunteers in a relaxed environment for specific effects. Participants agreed that the subjective experiences of each of the four psychoactive substances differed. The first band induced giggling. The second produced somatic sensations which participants called a physical "buzz", yet no mental effects were reported. The third produced drowsiness; and the fourth resulted in pure mental effects without physical sensations, including alterations in cognition and perception. The latter effects became most noticeable when in contact with a control group of participants who had not used the substance.

Informal observations over the years of the effects of different types of Cannabis Sativa suggest that perhaps these four different psychoactive chemicals change relative to the species, the growing conditions and according to the part of the plant from which the sample is taken (e.g., stems, leaves or blossoms). Since brainwaves usually show a different pattern during feelings of drowsiness than they do during feelings of alertness, it seemed reasonable to test different types of the substance first relative to the specific brainwave response we were measuring. An assumption was made that a substance which increased voluntary control of the full spectrum of brainwave frequencies would be preferable to one that seemed to enhance part of the spectrum while suppressing another. Therefore all eight of the participants and the experimenter decided on the use of the same type of Cannabis which increased

voluntary control over Bilateral Absolute Sync in alpha and which did not interfere with the already established natural voluntary control over the beta rhythms.

The results opened some new questions. Since all of the participants showed an increase in amplitude and percent-time of Bilateral Absolute Sync, all of the teams also demonstrated an increase in **Team Relative Sync** compared with previously recorded average scores. This could be counted as the automatic result. However, the surprise comes when we look at the scores in **Team Absolute Sync**. These were increased for two of the teams and decreased for the other two teams relative to previously recorded average scores. The criticism of the previous study which claimed that Team Absolute Sync simply reflected the increase by individuals of their own simultaneous alpha rather than a conscious act by two people can not be substantiated. The couples who increased Team Absolute Sync were intenly focusing on each other the entire time of the study. The couples who decreased their scores allowed their minds to drift to other times and places.

In the written experiential reports, neither team with a decreased score reported thoughts involving present time or space (e. g., one woman described a stream of images about the children and the baby-sitter at home; her husband wrote that his mind had drifted to a past time when he was at the beach). Of the two teams who had increased their Team Absolute Sync scores over previous studies, one team, absorbed in the poetic implications and experience of synchronized brainwaves, enjoyed the sense of touch. Their reports expressed an appreciation of the Sync experience, which allowed them to explore the intensity of the feelings of love between them. The other team, interested in music, found Team Absolute Sync to be like playing a tune. For both of these teams, phase synchronization of their brainwaves identified subtle forms of communication between them and the feeling of "being" in present time.

Since many of the original participants continued to volunteer for Sync practice, another question raised by the original study could be explored further. Since the total average scores of Team Absolute, but not Relative Sync were positively correlated with the total average team telepathy scores in the original study, and since these scores were not taken simultaneously, what would we find if we tested both at the same time? Eight teams agreed to practice telepathy while being monitored on the brainwave analyzers. An arrangement was worked out with longer wires from the analyzers to the phase comparator so that participants could be in the different rooms necessary for telepathy testing. The experimenter sat against the door, to monitor both the telepathy testing and the scores on the percent time counter. Biofeedback was not given to the participants, to eliminate as many distractions as possible from the task of focusing on telepathic communication. All conditions for attempting telepathy were the same as for the previous set of tests (except for the EEG attachments and soft machine noises, partially masked by the music used previously). An additional 70 trials (ten trials for each team) were produced in this study, bringing the total number of telepathy trials to 290. To avoid interference in the EEG signal (created from the natural movement during the drawing period), Team Absolute Sync scores were taken during the first visualization period, when both participants had their eyes closed for two minutes. A comparison was made between each telepathic response and the corresponding Team Sync score taken during the same trial period.

The results showed no direct correspondance between the two events; that is, higher Sync scores during the first part of a telepathy trial did not necessarily improve the accuracy of the receiver's response to that trial, nor did a lower score necessarily relate to a missed response. In spite of this lack of one-to-one correspondence, the total averaged scores continued to show the same statistically significant correlation that was reported in the original

study. The Team Absolute Sync scores were averaged from all three of the Sync studies, that is, the original Sync scores, the enhancement scores from the Sync/suppression study, and the Sync scores taken during the second telepathy study (excluding, of course, the Cannabis study scores in which ~~so few~~^{only four} of the ~~volunteers~~^{elveth} teams participated). These total average team scores were compared with the total average team scores from both telepathy studies which included all 290 trials. The telepathy tests were judged by ten independent judges (five for each method of judging), none of whom had any knowledge of the synchronization scores or of each other's judging results. The statistical significant correlation of ($p < .01$) is obtained for both ^{Kinds of scores. The ones obtained by the} the blind matching process and the ^{the} one^{s from} similarities matching process. This could indicate that the average amount of synchronization correlates with a general level of rapport between two people, but that successful communication is relative to a specific (and as yet unidentified) type of focus of attention present at the time of transmission. Participants often report "flashes" of images. This may be a clue that the reception happens with such speed that percent-time analysis could miss the event entirely. More advanced microcomputer technology is now being designed which will be able to explore this mystery further.

While the relationship of specific brainwaves to telepathic communication must wait for more advanced technology in EEG analysis, the simultaneous aspect of sending and receiving images could still be investigated by a different form of technology. Two television cameras which could feed into a single monitor would provide important information about the mysterious processes of direct visual communication between mind to mind. Since the similarities most often observed between target and response in these telepathic attempts were shape, and color, this suggests to me that some aspect of the visual system becomes activated directly during telepathy, quite, independently of the visual interpretation system.

To explore this phenomena further, the author asked two psychic artists, James Dowlin and Tom Byrne, to attempt to receive telepathic images in a video recording studio. Two separate video cameras were placed on each side of a large wall divider. One camera monitored the two artists as they worked at their drawing tablets, and the other camera monitored the sender's drawings which were on the other side of the divider, out of sight of these talented artists. The camera operators could see only the side of the divider they were on, and only the video image from their own camera. The studio director, Bob Boudreaux, could see the images from both video cameras from inside his sound proof room. The telepathy attempt would be video taped by the director, who could choose the image from either one of the cameras for recording, record them both on a split screen, or super-impose the images together to show simultaneous drawing activity by the sender and either one of the receivers.

The results produced some striking similarities. On two of the trials, the simultaneous drawing of the same shape by both the sender and at least one

of the receivers could be observed on the super-imposed image of the resultant video tape. In one instance, the similar shape also took on a similar concept. In another, the concept gradually became very different as the drawings evolved. In another, a theme from the target became the central aspect of the receiver's response. Seeing the process happen simultaneously reveals a great deal more about the visual intelligence system. However, an additional question arose in this exploration devoted to simultaneous events. One response was an accurate precognitive drawing, with the written comment, "Feeling pushed into a different dimension." The intention to know is perhaps enough for the mind to mock up in its sensory system images of things distant in both space and time. We have explored synchronization and simultaneity. A time shift represented by precognition may very well feel like a different dimension to the person experiencing it.

This first video tape pilot study demonstrated several important aspect of the process of attempted telepathic communication. There is no question that video tape can be used more extensively to reveal the dynamics of the subtleties involved in the direct transmission of visual imagery from mind to mind. This direction for the exploration of the process of telepathy seems to me to be the most promising for the future. If it can be combined with computer analysis of physiological monitoring, I believe that telepathic communication can become better understood and eventually utilized by school children as a natural part of their education.

DISCUSSION

This study explored several themes which I will now summarize. The first involved Bilateral Sync biofeedback training. Because additional research has been done in this area by other investigators, some comparisons among the results can be made. The second involved Team Sync biofeedback training. The third theme explored correlations between both types of Sync and telepathy. And finally, some of the types of similarities between targets and responses are discussed which raise questions for future research.

Bilateral Sync

Both Relative and Absolute Bilateral Sync learning scores were significant in the original study. Additional research by other investigators has since confirmed the notion that biofeedback training for synchronization of the alpha rhythms between right and left cerebral cortex has many potential uses. Ted Mikuriya (1979) reported that his schizophrenic patients demonstrated more voluntary control over attacks of anxiety, and some who continued the training even began to describe feelings of peacefulness and integration. Timothy Scully (1979) wrote about the prisoners who volunteered for the self-improvement program. Most of them reported that Bilateral Sync training was helpful to them in reducing stress reactions to prison life and for some it aided their ability to meditate in that environment. Both Scully and Mikuriya were using synchronization equipment designed by Scully. Scully has since developed a new instrument which features several aspects of computer analysis of a variety of physiological measures, a computer voice feedback of scores, plus a graphics feedback for interhemispheric synchronization in a wide range of frequencies, including the beta range. This represents a major step forward in the state of the art of biofeedback technology.

Some who continued the training even began to describe feelings of peacefulness and integration. Timothy Scully (1979) reported the results of Bilateral Sync training with prisoners who had volunteered to take part in a self-improvement program. Most of them reported that the Bilateral Sync training was helpful to them in reducing the stress reactions to prison life. Some said that the training aided their ability to meditate in that environment. Both Scully and Mikuriya were using phase comparison biofeedback equipment designed by Scully, who has since developed a new, more advanced, instrument which features several types of computer analysis of simultaneous physiological measures, such as EMG, GSR, BSR, Skin Temperature, and two channels of EEG. This provides variable tones, a computer voice, and computer generated graphics as feedback for Bilateral Sync in a wide spectrum of frequencies, since some of the people who do not produce much alpha

may prefer to practice Sync in the beta range. This represents a major step forward in the state of the art of biofeedback technology. Scully (note 7) states that,

"I have a personal belief that eventually we will be able to decode the body's language with enough accuracy to allow the construction of biofeedback training systems which can train for other specific patterns of physiological response. This can lead to personal voluntary control over very precisely defined states of consciousness".

Lester Fehmi (note 8) developed an instrument which uses an entirely different method of analyzing synchronization. This one averages five channels of EEG signals, instead of comparing the phase angles of two separate signals as the Scully monitor is designed to do. The Fehmi device provides a tone, a guided relaxation tape, and a strobe light in the alpha frequency as feedback signals. He also reports having successfully trained many people to synchronize their brainwaves, using the term, "open focus" to describe this experience. Bob Beck (note 9) designed still another type of brainwave monitor. He also reports successful training experiences with the people he has worked with. James R. Johnston (note 10) designed an EEG synchronization feedback system for the PDP-15 computer at the Langley Porter Institute, in San Francisco. This computer program was written for use in a pilot study of phase synchronization feedback sponsored by the Institute of Noetic Sciences (ON SP).

Four channels of EEG can be measured and recorded on mag-tape and chart recordings simultaneously, along with important information about eye and muscle movements. Audio feedback, consisting of four triangle wave oscillators, provide deep relaxing tones as feedback for any two of the pairs of channels (~~this was designed by Tom Etter~~). The Johnston computer program represents a technological advance for synchronization research, since it provides information about phase synchronization between all six pairs of the four channels of EEG. Generally, he has observed less ^{EEG} alpha synchronization between two channels from the same cerebral hemisphere (i.e., back to front) than is usually found between two channels symmetrically placed on both sides of the head.

From the collective results of these studies, the following two statements may be made: First, participants generally describe the Sync experience as peaceful, similar to meditation, euphoric, or a precise one-pointedness of focus of attention in the center of the head or body. Second, participants have reported that, in the process of analyzing this ^{involved in} experience or in becoming ~~attached to~~ a thought, the two EEGs being compared shift instantly from a synchronous to an asynchronous relationship. This blocks

the relevant ^{of attention}

the feedback tone. As the tone turns off, ~~that~~ shift in focus is also identified. Both the moment of synchronization and the mental activity which blocks it can be pinpointed by the participant after a period of training.

The implications for this type of training are multidimensional. The fields of health and education can both benefit from the realization that shifts in focus of attention are related to shifts in the electrical activity of the brain.

First, as an educational tool, Bilateral Sync and other types of biofeedback training can be used extensively: (1) to assist students to understand more about the variety and flexibility of their attentional processes so that they can learn to increase their own efficiency in learning, as needed; (2) to integrate the activity of the two hemispheres. (3) to enhance personal

self esteem and to generate creative insight. The intuitive process, once thought to be a specialized function of the right cerebral hemisphere, seems now to be evoked after a period of quiet sustained focus in the synchronous EEG pattern between both sides of the brain. Out of that period of no thought, perhaps through the silent resonance of the pure wave forms, the creative intelligence seems to manifest itself. This has been observed from the author's research, personal experiences, and from reports of former trainees. Flashes of creative insight have been reported often by participants, who have learned to sustain relatively uninterrupted synchronous EEG patterns. Once the internal feelings of synchronization have been identified, the practice of the experience can be continued without the biofeedback instruments. (e.g., one of the participants of the original study, Mark Harris, was interviewed about the usefulness of the training he had received seven years before. He replied, "Brainwave synchronization means that my right hand knows what my left hand is

doing. Since I'm a musician, and play the guitar, synchronization is definitely useful. I practice it all the time.")

Second, as a tool in the holistic health field, Bilateral Sync biofeedback has many uses, among them are these: (1) It can be used more extensively in the future under medical supervision to encourage the relaxation response in the prevention of stress related illnesses and for the relief of anxiety. With the new technology, more people can begin to explore synchronization in any frequency which is natural to them even if they do not produce much alpha. (2) Though further research is needed in this area, Bilateral Sync might be used in the future in the training of health practitioners. For example, Gregory Schelkun, the psychic healer who has participated in the ^{both JONS and Holmes Center} ~~author's current~~ synchronization studies, has reported that, "The synchronization training... has led me to some discoveries about my own cognitive style. ...I have also discovered that I can achieve alpha and some inter-hemispheric synchronization with my eyes open, as well, and that I often do this when I am working in healing.¶")

Team Sync

In the original study, the learning of Team Sync could not be demonstrated statistically for the group as a whole. Certain teams, however, could identify a feeling associated with the Sync feedback tone. Some of these same groups continued with the additional studies, and found that they could demonstrate a difference between Sync and the suppression of it. Those who could achieve Team Sync seemed to feel that the tone identified a meaningful but subtle communication level between them. Those who could not achieve/felt frustration and lost interest. In the Cannabis Sativa study, the increase in simultaneous alpha ^{which increased Team Re/lati} was not sufficient to aid the increase in Absolute Sync for two of the four teams. At the same time, the other two teams achieved higher scores than ever before, associating their Absolute Sync feedback tones with ^{the moments when their} strong feelings of rapport with ^{other} ~~their partners~~. Some participants in the pilot study done by Barbara Brown in 1974 could identify when their partner's were producing alpha simultaneously and some could not. Brown only tested simultaneous alpha, not Absolute Sync, ^{however,} yet in her study as well, we see wide differences between the results obtained from different people. Perhaps some of these differences can be explained by Figures 11 and 12. These are chart recordings of two EEG channels each for two people, done at Langley Porter, Inst. Figure 11 clearly illustrates the unique differences that can be seen between individual brainwave patterns which are as great as the differences between personal signatures. From that perspective, it is amazing that synchronization ever occurs at all between two people. However, these same two people do demonstrate some synchronization in Figure 12. How no outside observer can guess. Nevertheless, the two involved seem to report some subjective "consensus" about the process, (e.g., "Feeling connected at the heart center" or "feeling my partner through a sense of energy flow, familiar from the practice of Aikido").

In a different kind of study of Team Sync, Kamiya (1981) reported on a study (sponsored by the Holmes Center) in which the EEG's of healers and their clients were monitored and analyzed for Absolute Sync in the alpha range. No feedback was given since the question was whether Team Absolute Sync in alpha occurred between them naturally. The results were that very little synchronization occurred between healer and client that could be measured. Most of the healers produced fast beta during the psychic healing sessions, which was confounded by the possibility of some ~~interference~~ of the electrical activity of muscle tension which covers the same range of frequencies. During the healing session, Gregory Schelkun, one of the healers who participated in the study, demonstrated some unusual individual EEG patterns, such as an increase in Bilateral Absolute Sync in alpha while his eyes were open prior to the laying on of hands, and then shifting to fast beta rhythms when his eyes were closed. Schelkun and his wife, Priscilla, later took part in a Team Sync Feedback training program. They could identify and produce Team Sync to a remarkable degree. Still, the healing process seemed to be very different. Perhaps harmonics exist, but new technology would have to be developed to explore the possibility.

Johnston (note 10) sees one of the uses of the synchronization feedback tool as a more "holistic scientific tool that enhances the connection between observer and experiencer, not only in the research setting, but within an individual, as s/he observes his/her own experiences." He expects this kind of research to "lead us to very interesting questions regarding the boundary between inside and outside, between self and other. The influence of experimenter on subject is becoming widely recognized. The use of biofeedback as a physiological mirror to probe inner states of being will increasingly cause us to question some of the assumptions built into the way we in the scientific disciplines ask questions and formulate methods for finding answers".

Absolute Sync and Telepathic Communication

One of the hopes of the original study was that a significant correlation might be found between the scores of Bilateral ^{Absol.} Sync and the scores of successful attempts to communicate telepathically. This hope was not fulfilled by the results of the study. Some individuals felt that Bilateral Absolute Sync training actually helped them to improve their telepathy results, some did not. Perhaps one of the problems of attempting to relate a specific frequency range (alpha in this case) with certain events in thought can be illustrated by the following:

In a study by King (1979), high school science students were instructed in the use of the EEG Biofeedback Light Sculpture. They worked in teams to help each other track brainwave frequency ranges relative to mental activity. The collective reports by students about some types of thoughts demonstrated considerable agreement about frequency (i.e., percent time of the alpha range generally increased with relaxation and percent time of the beta range generally increased with the alerting reaction), but when the students thought about sex, their EEG reports were almost evenly divided between alpha, beta, and theta.

Thinking about about sex may be similar to thinking about telepathy or other subtle forms of communication, in that the frequency depends more on individual cognitive style or type of response to the activity, than it does to specialized functions of the brain. As technology advances, this question of specific frequency might be answered more precisely than it has been in the past, or we might find that it is the wrong question. Perhaps the next questions are, might sucess in psi activity be related: (1) to Bilateral Sync

in any frequency; (2) to an asynchronous bilateral EEG pattern which might suggest some form of hemispheric specialization; or (3) to different but consistent EEG patterns for each psychic?

As suggested by the King study, future research could be advanced through individuals who want to map their own personal cognitive processes and compare them with the results found by other individuals for similarities and differences. Participants should be allowed to adjust the feedback mechanisms of specially designed equipment to monitor the specific parameters of their own psychic "working" mode. This would represent an important shift from the "experimenter controlled research paradigm" toward a "participant centered research paradigm" (Ferguson, 1980). Through this methodology, a consistent relationship between EEG patterns and success in psi tasks may yet be demonstrated by an individual for him or herself.

One of the most intriguing results of the original study was the contrast between the positive correlation ($p < .01$) of the telepathy scores with the Team Absolute Sync scores, and the almost random relationship between the telepathy scores and the Team Relative Sync scores. Simultaneous alpha between two people seems by this to have no relevance to their mutual ability to share an image. Yet the amount of Team Absolute Sync depends on the amount of simultaneous alpha. Apparently what changes relative to telepathic similarities is the ratio between the percent time of simultaneous alpha and the percent time of phase synchronization. Adepts of the psychic realm have referred to an ability to focus the intention to know in a sustained way. Perhaps this focus of intention is another interpretation of the Sanscrit word "sanyama". Perhaps what has been exposed here is simply the ability to focus, which works as ~~equally~~ well for achieving Team Absolute Sync as it does for attempts to communicate telepathically.

Penfield (1974) has described the upper brain stem (the thalamus area, in the most protected center of the brain) as the highest brain mechanism, because it acts as a "switchboard" for the activity of the cerebral cortex, and represents the area of "intention." The intention to know anything precedes perception. The mind creates all its sensory impressions selectively (Pribram, 1977). The images, sounds or feelings which the intender chooses to become aware of are then modified by personal memories, by the internal or emotional state and by the environment (Popper and Eccles, 1977). The intention to know is enough for the mind to create a sensory impression no matter how near or far in time or space the target is from the receiver. Without sensory response, there is no communication (unfortunately, the use of the term, "Extra-sensory perception, often has confused scientific investigation of the area of perception). However, the vast differences in cognitive styles, representational systems (Grinder and Bandler, 1976), and perceptual processes between different people create a natural source of error in the attempts to communicate, whether telepathically or face to face. The methods of improving telepathy involve learning to interpret the sensory impressions relative to the symbols used by both members of the telepathic team. By balancing the modes of mental processes between "content analysis" and "clearing the mind", between "open focus" and "narrow focus", many subtle forms of communication between people will be found which can be explored psychophysiologicaly.

Eventually, words like "paranormal" and "parapsychology" will gradually fade from the language. These will be replaced by new words that will evolve out of the continuing creative development of microcomputers as amplifiers of intelligence. While mind/brain/body interactions with micro-compters can aid the natural evolution of human abilities in exponential ways. The fleeting images of our auditory and visual system will be the first sensory intelligence to make us aware of how we will grow.

Comparisons Between Telepathic Targets and Responses

Illustrations of some of the responses to the telepathy trials are presented for comparison of imagery and other similarities.

In Figure 5, several examples of the shape similarities are seen. When shape was the only similarity, the responses were rarely matched by the blind matching techniques. However, shape was the category most often observed by the judges of similarities. The color category was the next most frequently observed similarity. A verbal reference to color is presented in Figure 5, D.

In Figure 6, examples of concept similarities are presented. All of these responses were matched correctly by the judges using the blind matching techniques.

In Figure 7, judges rated mood similarities when the receiver seemed to express the feelings of the characters in the pictures, perhaps by identifying with them. One target was a photograph of a grey stone statue of Jesus on the cross. The receiver drew a set of carpenter's tools, with a pair of pliers in the same shape and black color of the sender's drawing of Jesus. The only comment was, "I feel drained." Many levels of communication and types of cognitive processes can be observed through free-response telepathy.

The word similarities are presented in Figure 8. The words have been underlined for easy recognition. Only "A" was matched correctly in the blind matching process.

A drawing similarity was usually correctly matched by the blind judging techniques, though few actual drawing similarities were observed in the study as a whole. Some are presented in Figure 9. When the receiver did produce an accurate drawing, the communication was often clear enough so that a number of other similarities could be observed in the same response.

Figure 10 presents responses which were not matched by either set of judges. They represent certain types of "errors" seen repeatedly by different teams. While Ullman, Krippner and Vaughan (1973), looked for telepathic material woven into dreams, many responses, such as these, suggest dream type symbolism woven into the receiver's drawings during telepathic attempts.

After analyzing the data from the similarities matching study previously mentioned, Blau (note 11) became interested in studying the telepathic responses for additional content in the same way that he had studied the content of the dream journals that he had kept for twelve years. He and his wife, Jeannie, completed 325 telepathy trials and he and Chris Crisa completed an additional 700 trials. He combined these with the 290 trials of ^{my original} ~~the author's~~ study and with other free-response telepathy studies published in the United States and in England. Blau's analysis of a total of 2,500 free-response telepathy trials revealed an almost constant probability of certain nouns occurring in the response set. Blau observed that this near constant proportion of responses is obtained from receivers, regardless of what goes into the target pool (e.g., human, animal, object, nature). He claims that by analyzing the normal stream of consciousness, he can provide statistical numbers for free-response telepathy

with a limited
number of
symbols

which can now only be done when cards are used. If true, the judging of free-response tests in the future could be done more efficiently with statistical probabilities for each response given. (e.g., the probability that a receiver will respond to a target picture of the Statue of Liberty with a drawing of a person, will have one number, but if he responds with a drawing of the Statue of Liberty itself, and labels it accordingly, then the probability would be much greater. This number would be relative to the size of the target pool, and whether or not there was more than one such target picture in the pool. Blau's system would be an improvement over the statistical methods used

^{my}
~~in the author's~~ study, which measured the judges ability to match the responses in sets of five, rather than the ability of the telepathic team to transmit specific images out of the one hundred different possible images in the target pool.

The exploration of types of similarity categories and the Blau analysis of the frequency of occurrence of nouns in telepathic attempts may prove eventually to be quite useful in the understanding of many forms of communication. From the similarity study, a new appreciation of the intelligence of the visual system arises. This has vast implications for the future of education. Methods of training the visual system to improve its communication abilities directly, without having to translate inner visions back into the verbal system first, have been devised (Gottlieb, note 13; Millay, 1979 and note 12). With the dynamic visual stimulation presented by television, and the impact of visual advertisement, it is important to learn how we respond to certain visual symbols, to protect ourselves from what Key (1973) has termed the "subliminal seduction" of advertising through visual symbolism. Millions of dollars are spent each year to exploit the unconscious reactions of people to visual stimuli. Learning to be aware of imagery and to communicate in visual

terms is, in the opinion of the author, as equally important as learning to read the Bill of Rights. These issues have profound political implications. What do you see when you close your eyes? How do you know that your own thoughts are not mixed up with the thoughts of others?

The practice of telepathy will reveal the content of ones own mind, even if one does not receive "messages" very clearly from any one else. By continuous checking for validation, gradually one learns what kinds of images to trust as being "sent" from another person and what kind to classify into the realm of the otherwise subliminal internal dialogue. In this way we can begin to understand the Patanjali instructions: "By observation through sanyama of the content of the mind arises knowledge of the content of another's mind", (Brown, note 1). Though the exact translation in terms of psychophysiology has so far escaped researchers, the search for which might be expectancy that some form of resonance is involved in telepathy can be investigated in more precise ways as new technology is further developed.

In the meantime, any person, who wants to expand his/her ability to know about thoughts, things and events at a distance in time or space, needs to make a small adjustment in his/her belief system. First, he must assume that it is possible to know such things. Next, s/he must practice maintaining a focus of intention to know. Next comes the sorting process, which thoughts are internally generated, which have been stimulated by outside influences. And finally, learning to become non-attached emotionally to the results, and to be willing to double check responses with signals, these are the most important part. Or else the person can become caught up in a cycle of delusions which are only projections of the internal dialogue onto the outer world. Perhaps it is this latter process which causes some organizations to warn their members against the dangers of practicing telepathic communication. Nevertheless, ~~ignorance~~ ignoring psychic sensitivities when they impose themselves on our awareness, can be just as dangerous, not only for the individual, but for the whole society in which s/he lives. The expansion of the creative capacity of human intelligence depends on being open to all the ways that humans come to "know" about the world and decide on the nature of "reality".

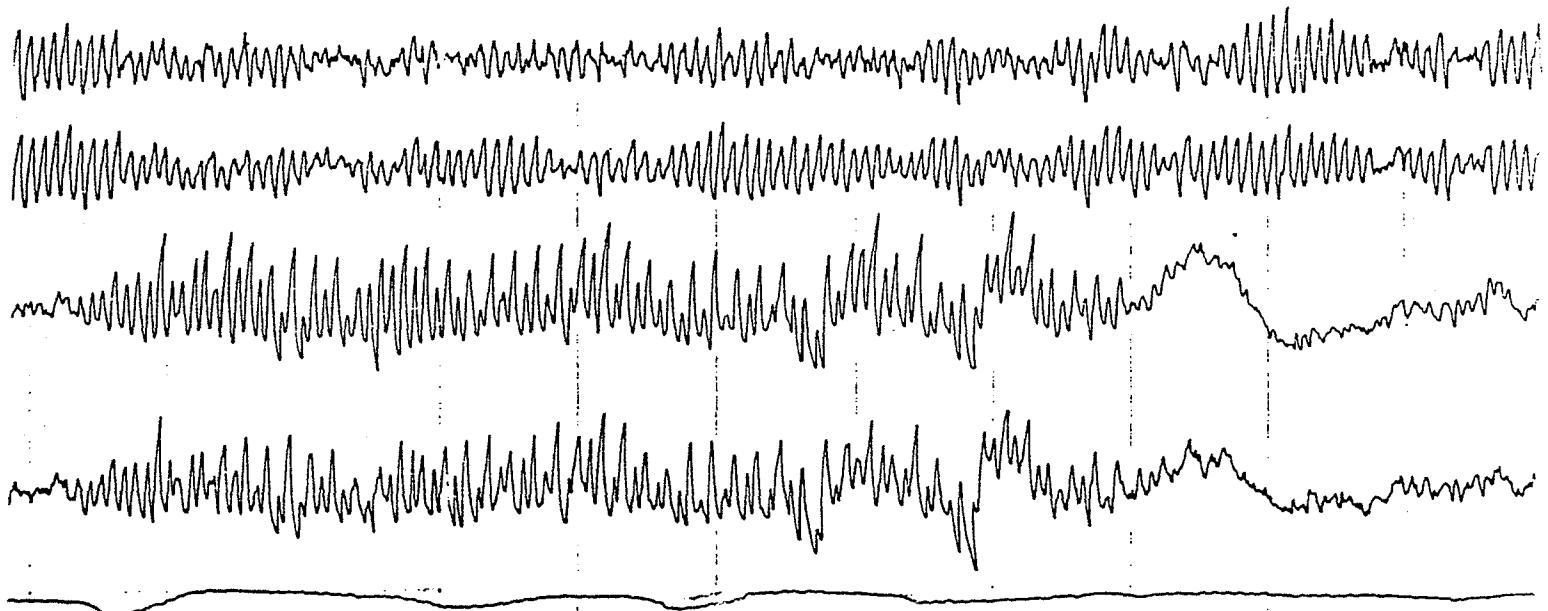


Figure 11.

Figures 11 and 12 show the simultaneous EEG records of two people. The line on top of the EEG records in figure 12, below, shows the markers which identify Absolute Sync within the long bursts of simultaneous alpha rhythms.

The electrodes are placed symmetrically over the occipital areas of the scalp of both right and left hemispheres for both people. The first line is the left, and the second is the right for M.H. The third line is the left and the fourth is the right for J.M. As you can see, the pairs of lines are very different, almost like the differences of personal signatures. The top four lines represent resting baseline measurements. The bottom four lines, are a continuation of the same arrangement of EEG records for the same people, but this is later on in the session. They have been copied onto the same page for comparison. Now we see that the brainwaves are more alike, with some synchronization appearing. This is after some practice with the biofeedback tones. What do the participants of this exercise report? According to M.H., "It's like tuning in." J.M. responds by saying,

"The tone identifies a feeling I already know. It's a special feeling of just being together without need of conversation".

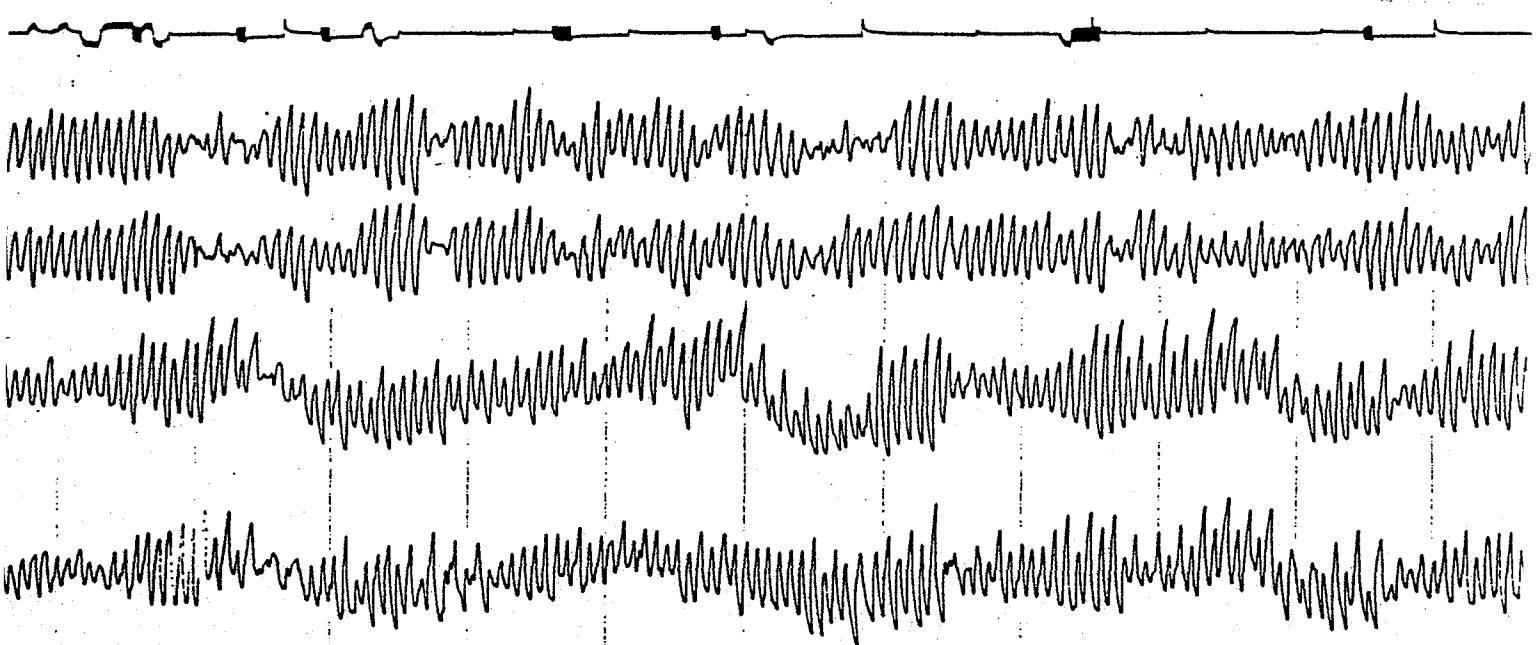
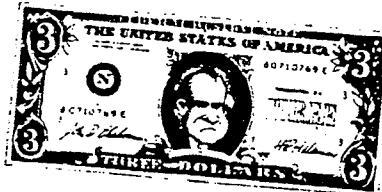


Figure 12.

TARGET

SENDER'S
RESPONSERECEIVER'S
RESPONSETARGET: THE RICHARD M. NIXON THREE DOLLAR BILL

BLACK

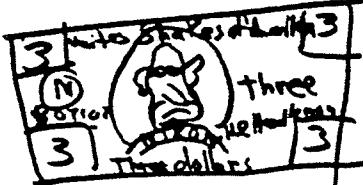
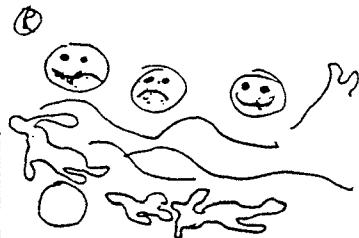
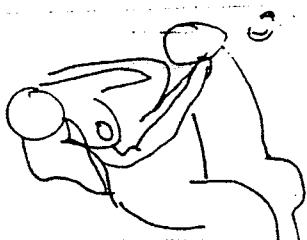
S: He is depressed, sad case.
Hockle! Sick. Oh No!S: sadness, grief, death, gray loss.R: Something with a charge on it
Humorous maybe morbid Humor
had an impact
curvy lines not angularR: I feel drained.

Figure 7. These are examples of Mood similarities.

Receivers demonstrated some personal differences in representational systems by the types of similarities which were dominant in their responses. Those who expressed their "feelings", by identifying with the mood of the target, rather than by "seeing" the target, often found that their responses could not be matched. Neither target "A" nor "B" were matched. It is most curious that the response to a picture of a grey stone statue of Christ was a drawing of a set of carpenter's tools (with pliers in the same shape and black color of the sender's drawing). This suggests many unexplored levels of types of telepathic responses which might be improved through further study.

SE: SEX. YUM YUM. TO BODIES WARM
YUM YUM. SEX. YA! YA!ME: DICE. LOOKING OVER A MAN'S RT. SHOULDER.
(FEEL HUNGRY, CIGARETTE.)ME: A LOT OF HEAVY RELIGIOUS FEELINGS -
THE UNIVERSALITY OF JESUS.
DEATH, THEN REBIRTH.ME: DARK, HEAVY MEDIAEVAL COLORS & FEELING.
BOOK & PERSON IN PAINTING SEEMED TO BE
MOST IMPORTANT.

Ron - You have the better pictures & type

TARGET	SENDER'S RESPONSE	RECEIVER'S RESPONSE
		
		

Figure 5. These are examples of shape similarities.

When the receiver's response showed only a shape similarity to the target and/or to the sender's response, the judges (using blind matching techniques) rarely matched the set correctly. To be counted as a successful telepathic response, at least three of the five judges had to have matched the set. Only the "D" set on this page was considered a successful telepathic attempt by these methods of judging.

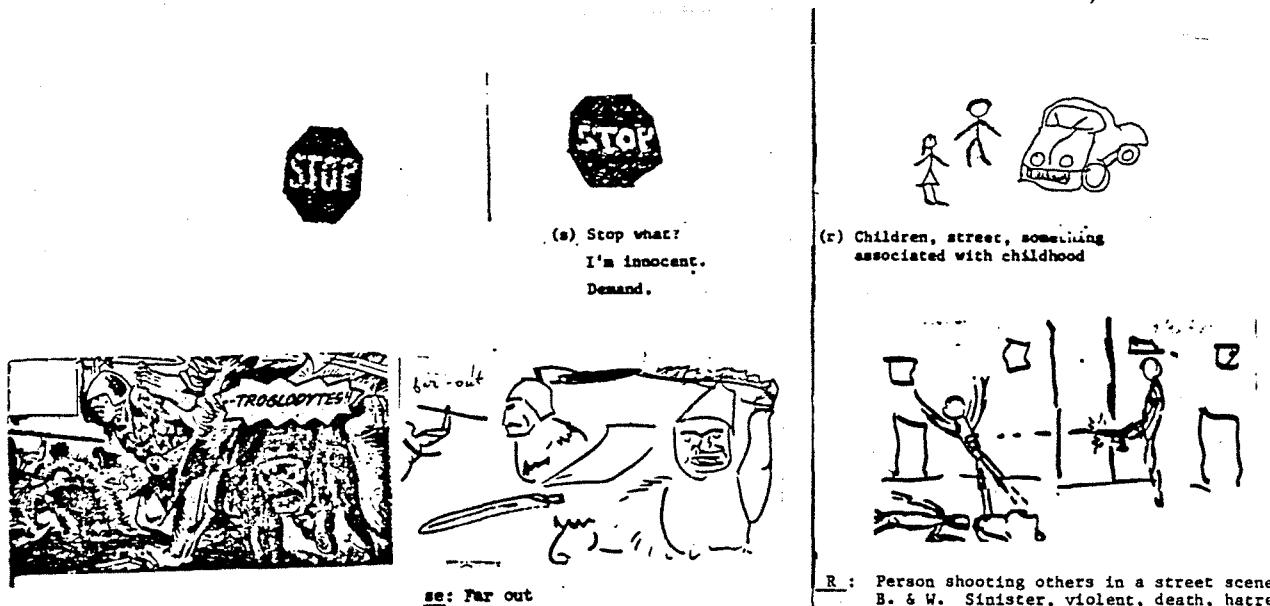


Figure 6. These are examples of Concept similarities.

The receiver's responses, which were rated similar in concept, were more often matched by the judges (using the blind matching techniques), than were those responses which were rated similar in shape. All of these examples were judged successful telepathic attempts. Notice the lines are circular around the eye of the nuclear blast in target "C," while in the sender's drawing the lines are straight, similar to a conventional drawing of the sun. The receiver seemed to blend these two ideas into one response.

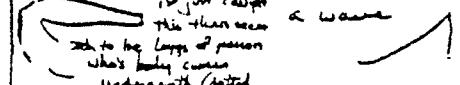
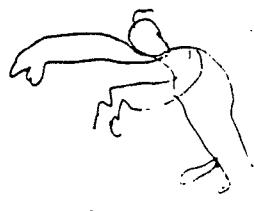
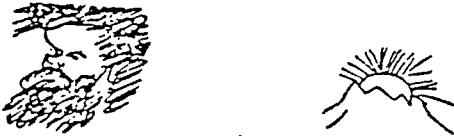
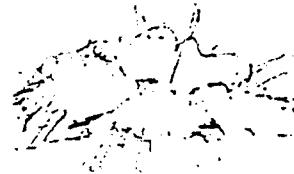
TARGET	RESPONSE OF SENDER	RESPONSE OF RECEIVER
	 S : Warrior - animals	 R : Fire breathing dragon. Puff? Book dragon. Magic. Andre Morton.
	 S : Action, violence, comedy, dumb. focused at first on WOK!	 R : Man yelling; seems to be in pain; person not caricature. Expression of pain is main impression. yellow flash across right side right side I just caught this then saw a wave who to be legs of person what's body comes underneath (dotted line) Underneath (dotted line)
	 S : (No written response.)	 R : Yellow flash across right side. 1st, just caught this, then seemed to be legs of person who's body comes underneath (dotted line). A wave. Right side of face feels like a light but steady pulsing.... Also flashed on a pineapple and a woman with short dark hair and a lei.
	 S : Man beaten up, bandage on head, pain, sorrow.	 R : Glass of milk at first.
	 S : Colorful. Oh, my! Nasty. Poor lady. Mean, beastly. Ogrely.	 R : Branching. Reaching out. Antlers - Hand. Attraction between opposites.

Figure 9. These are examples of Drawing similarities.

Drawing similarities, such as these, were generally matched correctly by the judges using blind matching techniques. It is easier to match a response, if there are clearly defined similarities to the target. The most interesting aspect of these illustrations, is the blend of imagery as in "D". The lines around the sun in the sender's drawing, become the lines around the head of the receiver's drawing. The large "O" in the word, "WOK" becomes the open mouth. In "E", the flowers in the background and the scroll around the tub become a flower "lei". Ashurbanipal and a lion in a classic pose similar to many paintings of St. George, invokes a "fire breathing dragon" in example "A".

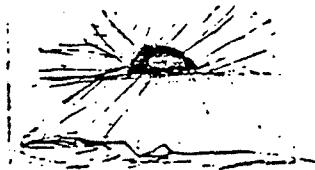


Free-response test reported by Sinclair (1930).



S : ANGER, FACE, GENTOS.

R : SUNNY, BRIGHT.



S : GENTLE MAN, RICH WITH LIFE'S EXPERIENCES.
GOOD VIBES.

R : SUNSET ON OCEAN BEACH -
VERY NICE - TOGETHER FEELINGS.



S : Warm, loving, exciting.
Natural, fresh sweet skin.

R : Lunar eclipse of sun. Sun is
really bright - very clear picture.
Fire feelings - full of energy.

Figure 10. These are examples of the same "errors" by different teams.

The idea that the sun is a masculine symbol is a very old one, observed in the art of many cultures. Similarly, the moon is represented as a feminine symbol. When four different receivers (including Mary "Craig" Sinclair, in 1930) produce the same type of paired images, it is time that telepathic imagery be re-examined by those who study the symbolism of dreams. Clearly, the number of these paired responses indicate more complexity in telepathic communication than simple "hit" or "miss" scores would suggest. Perhaps if both members of a telepathic team would study each other's personal mythologies, dream journals, and representational systems, they could learn to improve their own subtle forms of communication on many levels simultaneously.